

REMARKS/ARGUMENTS

In view of the foregoing amendments and following remarks, favorable reconsideration of the pending claims is respectfully requested. Claims 1 and 18 have been amended to recite that the membrane reformer produces a stream of hydrogen gas and a stream of off gas, and that the off gas is used as a heat source for the membrane reformer. Support for this amendment can be found, for example, at page 18, lines 15 – 19. New Claims 20 – 22 have been added and are directed to different structural embodiments of the claimed invention. Support for new Claims 20 – 22 can be found throughout the specification, for example, Figures 4 and 5, and the discussion on pages 17 – 19.

Claims 1 – 19 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of two or more references. Specifically, Claims 1 – 4 and 11 have been rejected as being unpatentable over the combination of Ovshinsky et al. and Iijima; Claims 5 – 6, 10, and 12 – 14 have been rejected over the combination of Ovshinsky, Iijima, and U.S. Patent No. 5,686,196 to Singh et al.; Claims 7 – 8 have been rejected over the combination of Ovshinsky, Iijima and U.S. Patent No. 5,124,140 to Okada et al.; Claim 9 has been rejected over the combination of Ovshinsky, Iijima and U.S. Patent No. 6,908,700 to Lio.; Claims 15 – 17 have been rejected over the combination of Ovshinsky, Iijima, and U.S. Patent Publication No, 2002/0085963 to Vidalin; Claim 18 has been rejected over the combination of Ovshinsky, Iijima, Singh, Lio, and Vidalin; and Claim 19 has been rejected over the combination of Ovshinsky, Iijima , Lio, Singh, and Vidalin.

Independent Claims 1 and 18 have been amended to recite that the membrane reformer produces a stream of hydrogen gas and a stream of off gas, and that the off gas is used as a heat source for the membrane reformer. Such a hydrogen production system is not disclosed or suggested by the cited references. Accordingly, the combination of the references fails to disclose or suggest each and every claim element recited in Claims 1 and 18, and it is therefore respectfully submitted that the rejections under 35 U.S.C. § 103(a) have been overcome. Thus, Claims 1 and 18, and any claims dependent thereon are patentable over the combination of references.

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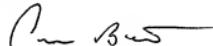
Similarly, new Claims 20 and 22 also recite a membrane reformer that produces a stream of hydrogen gas and a stream of off gas, and that the off gas is used as a heat source for the membrane reformer. As such, Claims 20 – 22 are also patentable over the combination of cited references.

In view of the foregoing amendments and remarks, it is respectfully submitted that the rejections under 35 U.S.C. § 103(a) have been overcome, and that the pending claims are in condition for allowance.

Conclusion

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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